

KIC 006628740

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
006628740-01	OBS	7571.01	0.532854	131.957202	18.4	2.564	9.8	8.1	1.61	6266	0.70	20283.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006628740-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

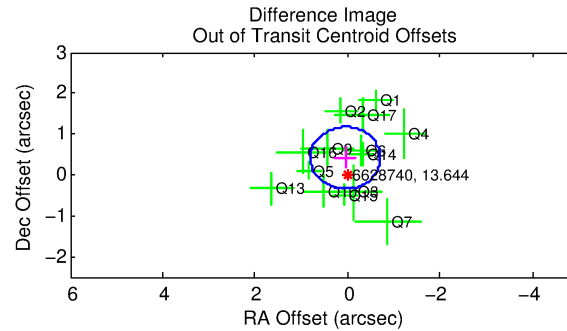
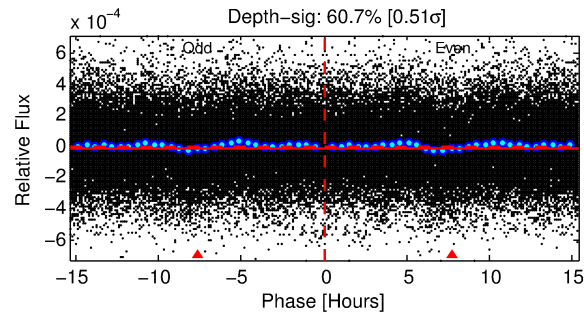
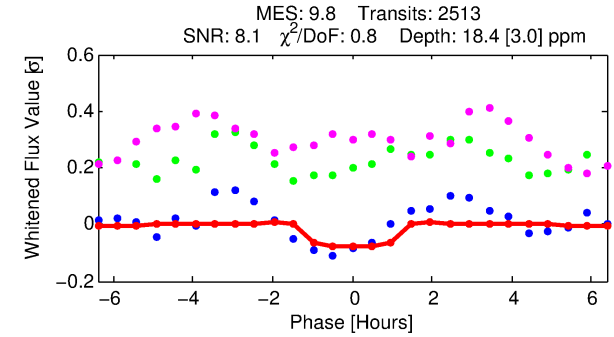
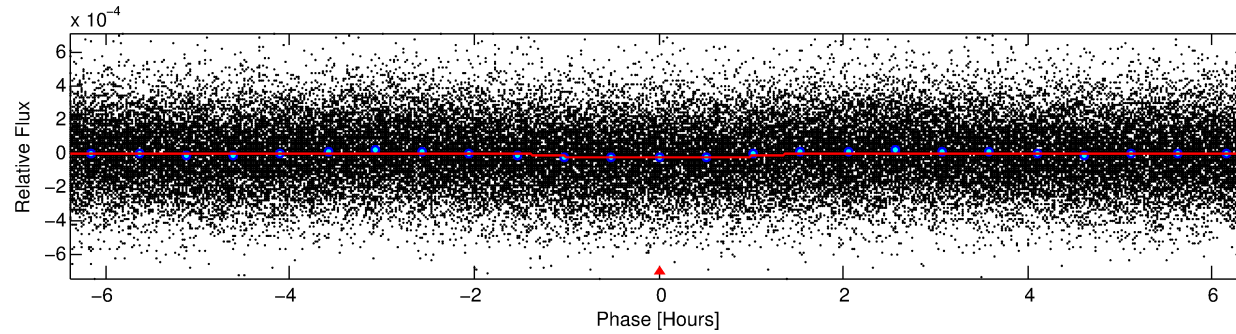
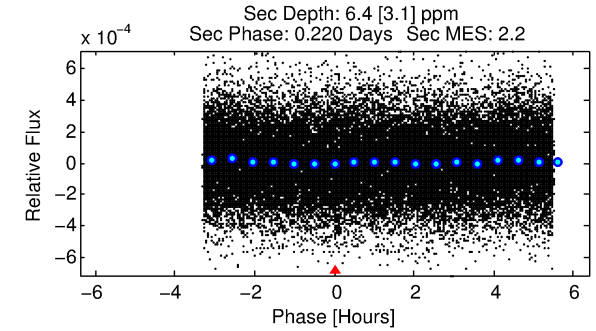
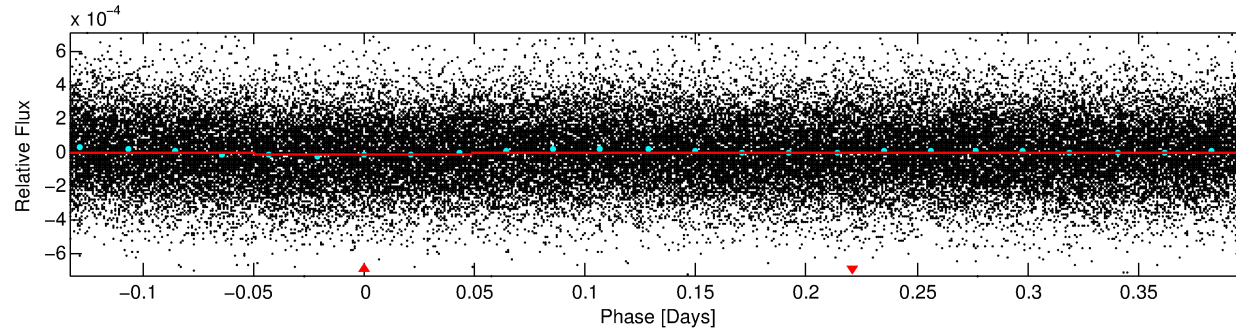
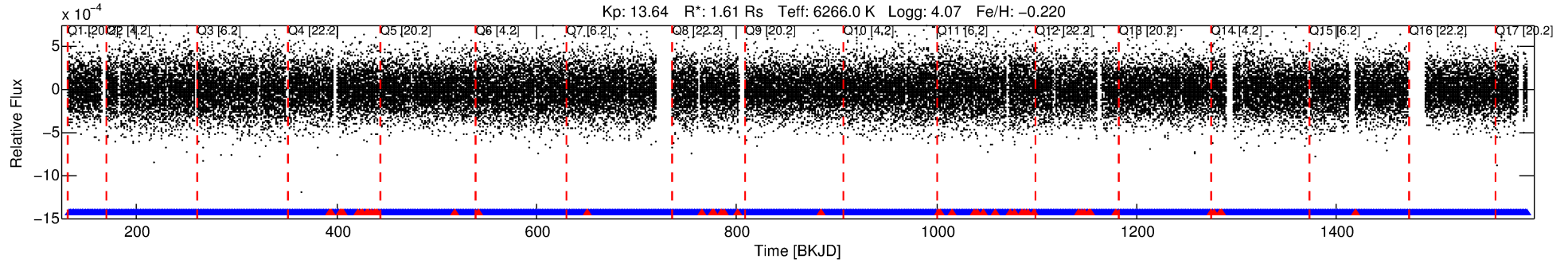
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006628740-01

No Significant Match Found

DV One-Page Summary

KIC: 6628740 Candidate: 1 of 1 Period: 0.533 d
KOI: K07571.01 Corr: 0.787



DV Fit Results:

Period = 0.53285 [0.00001] d
Epoch = 131.9572 [0.0035] BKJD
Rp/R* = 0.0040 [0.0037]
a/R* = 1.66 [5.00]
b = 0.28 [15.76]
Seff = 20283.12 [11336.70]
Teq = 3043 [425] K
Rp = 0.70 [0.69] Re
a = 0.0133 [0.0044] AU
Ag = 1.26 [2.51] [0.10σ]
Teffp = 4988 [2394] K [0.80σ]

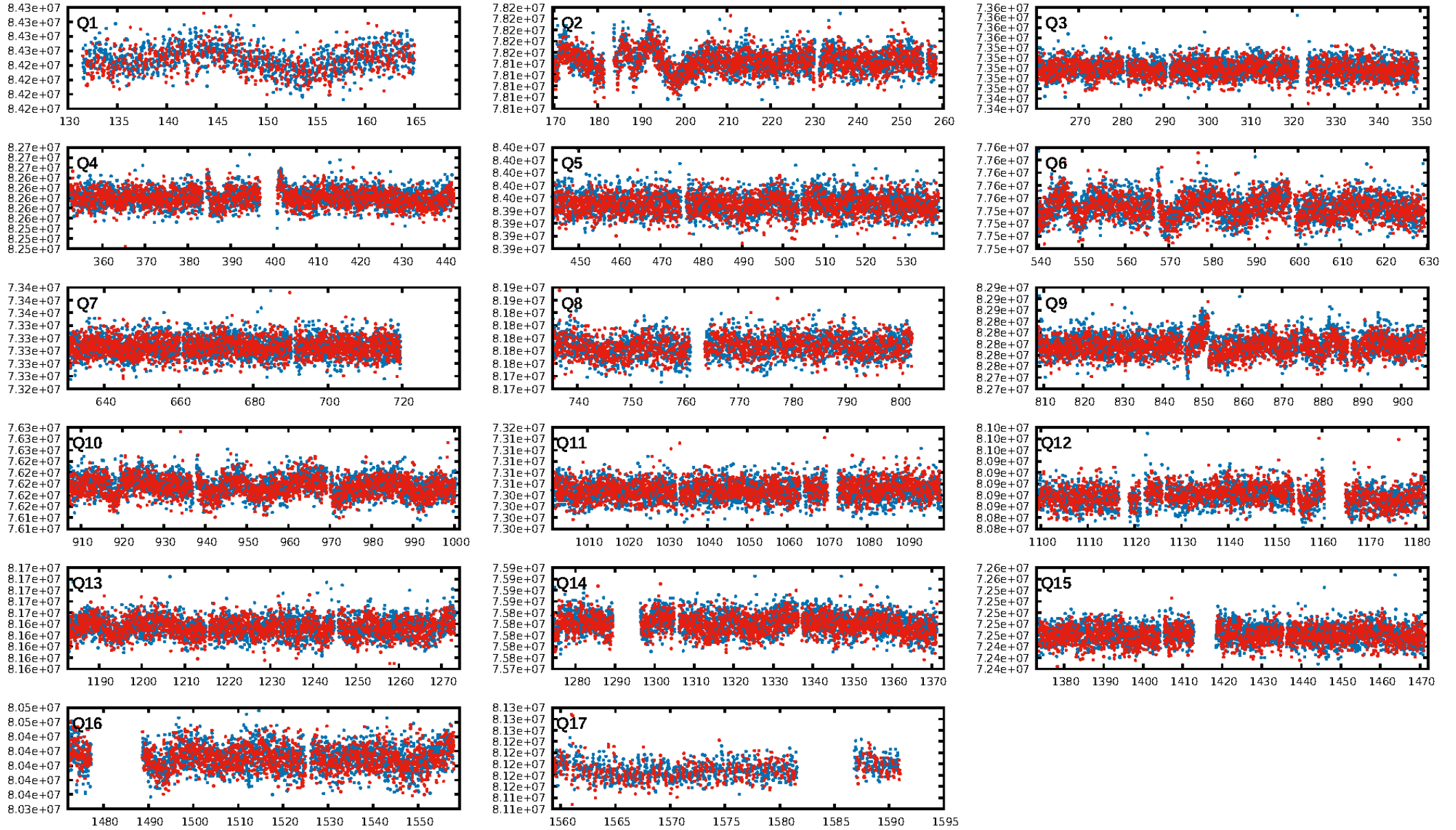
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.70e-15
RollingBand-fgt: 0.98 [2345/2400]
GhostDiagnostic-chr: 0.858
Centroid-sig: 93.8%
Centroid-so: 0.372 arcsec [0.29σ]
OotOffset-rm: 0.418 arcsec [1.65σ]
KicOffset-rm: 0.365 arcsec [1.46σ]
OotOffset-st: 4/3/2/5 [14]
KicOffset-st: 4/3/2/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [17/17]

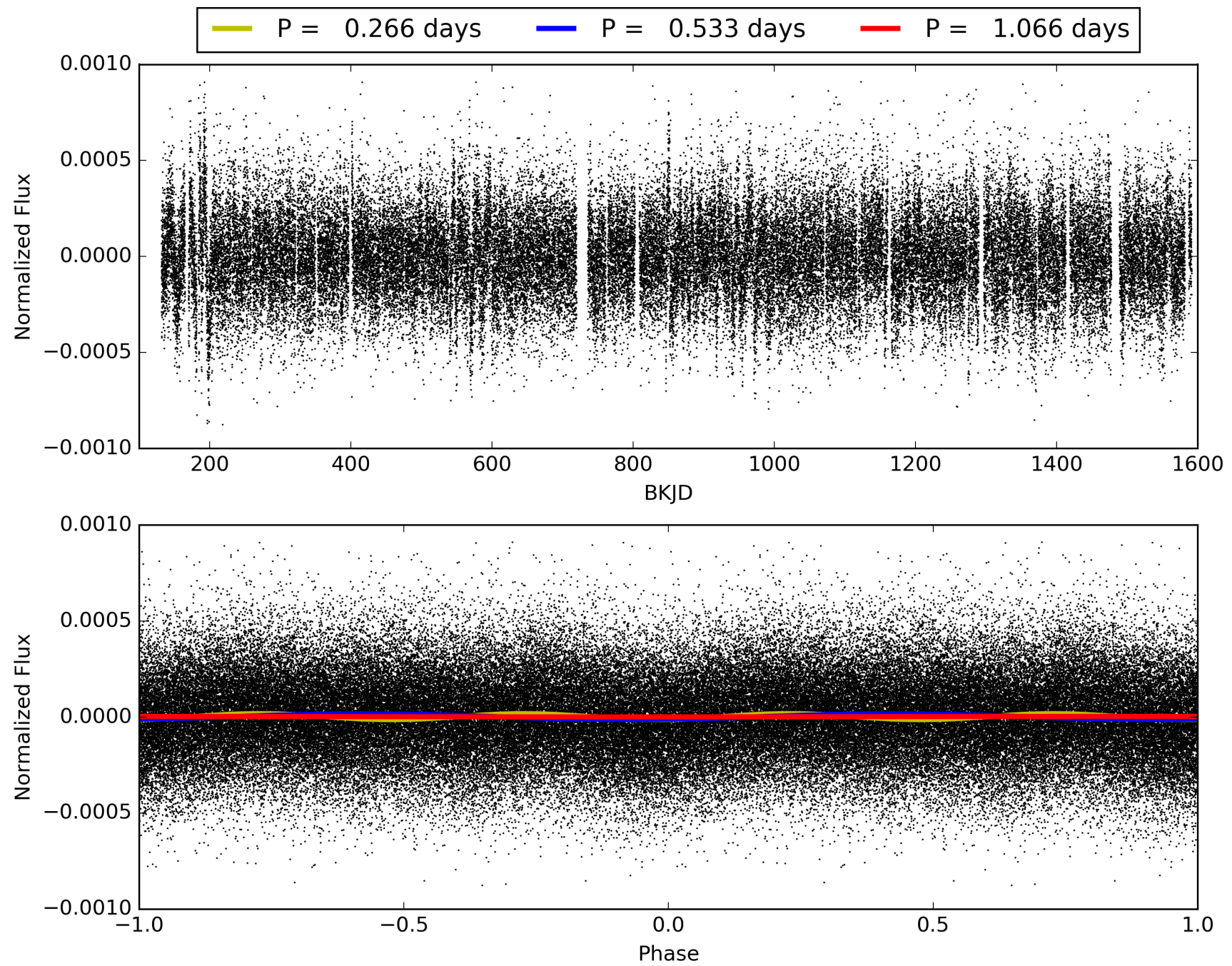
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:43:14 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006628740-01, PDC Light Curves

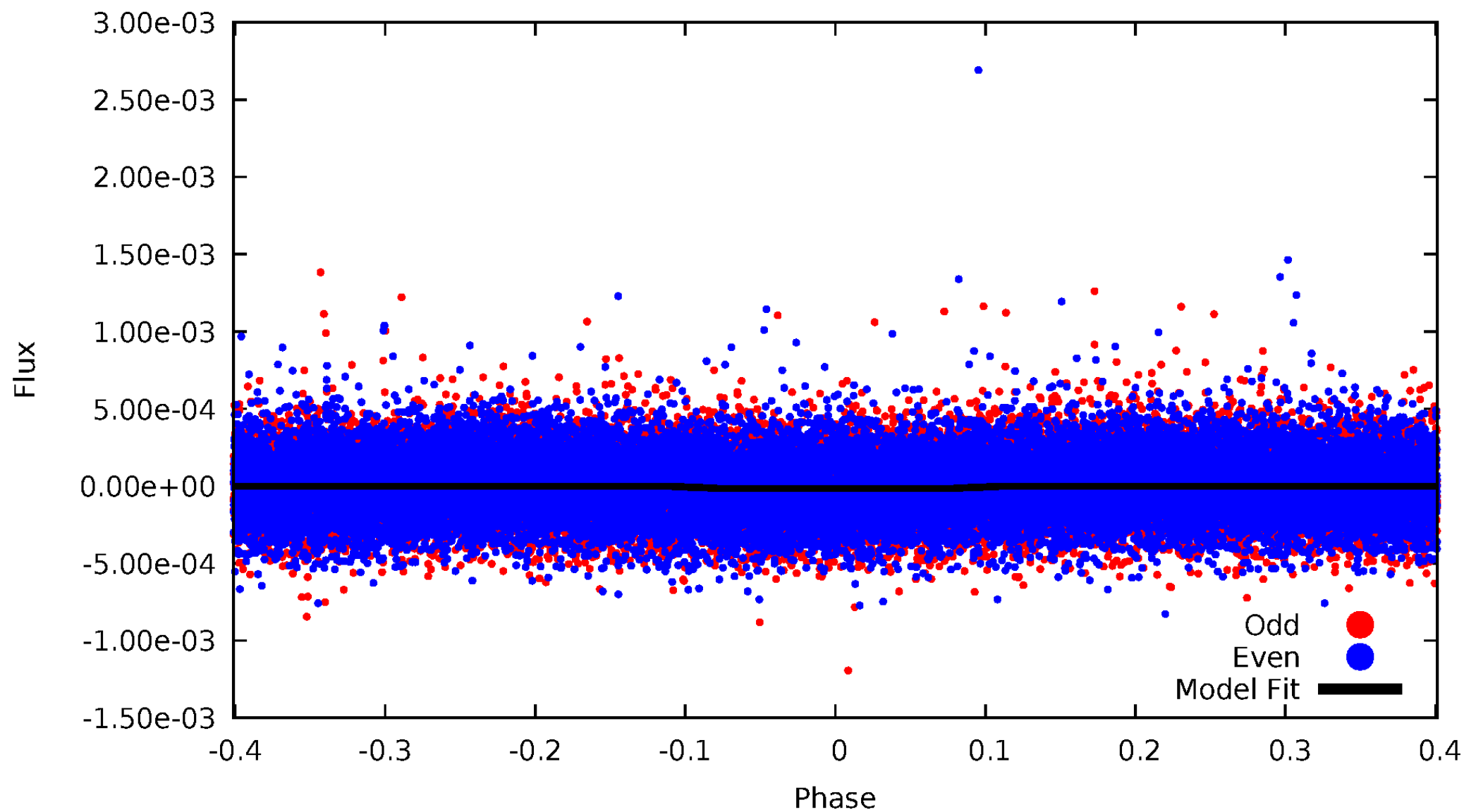


TCE 006628740-01



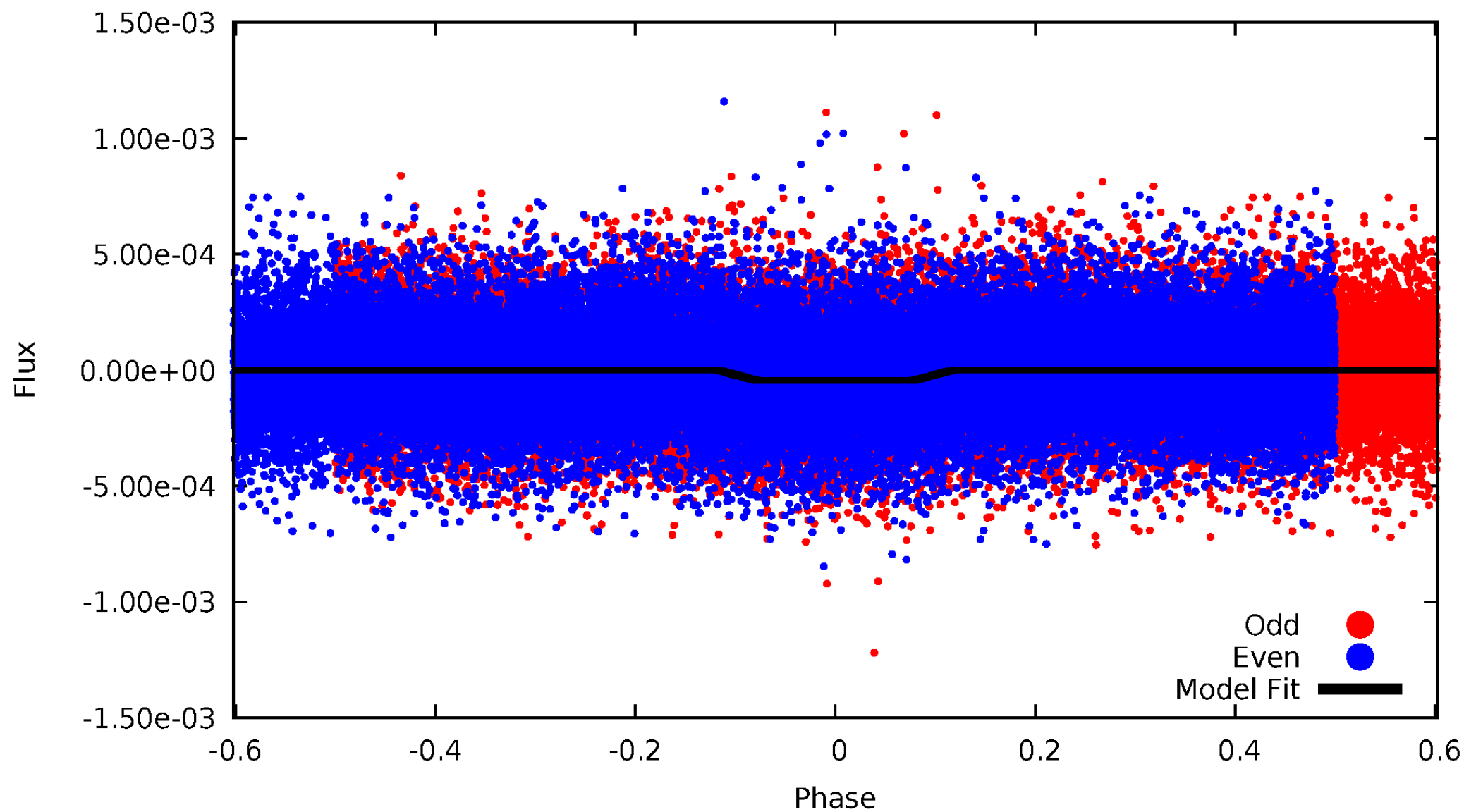
DV Odd/Even

TCE 006628740-01



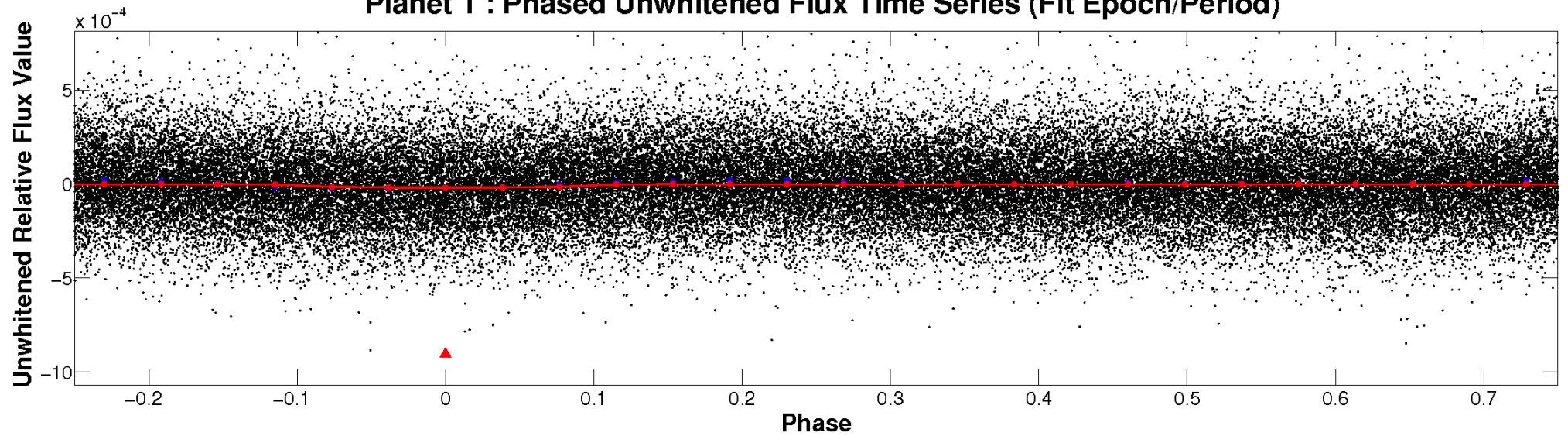
ALT Odd/Even

TCE 006628740-01

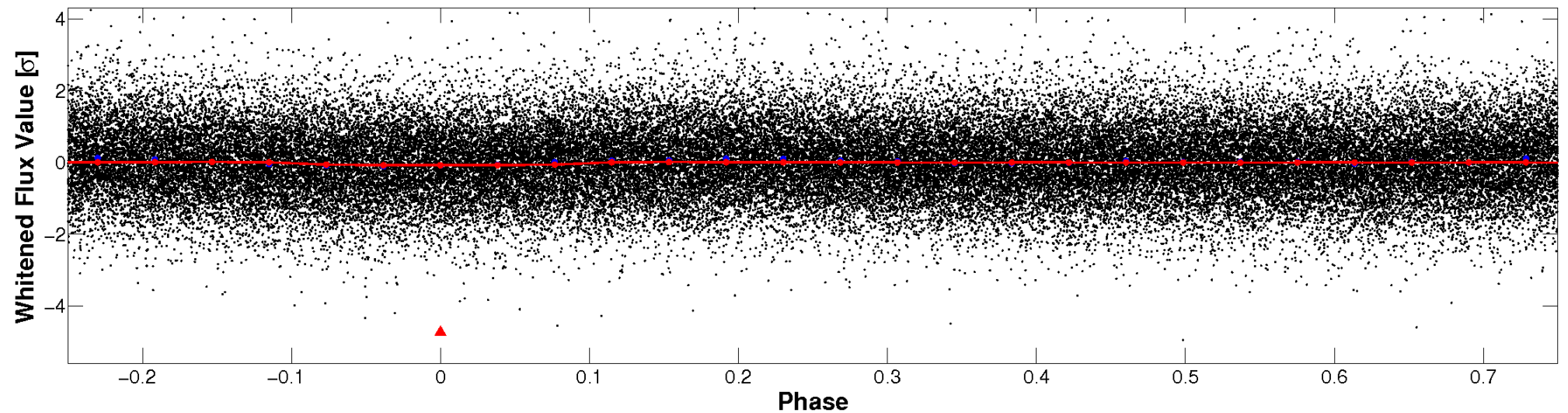


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

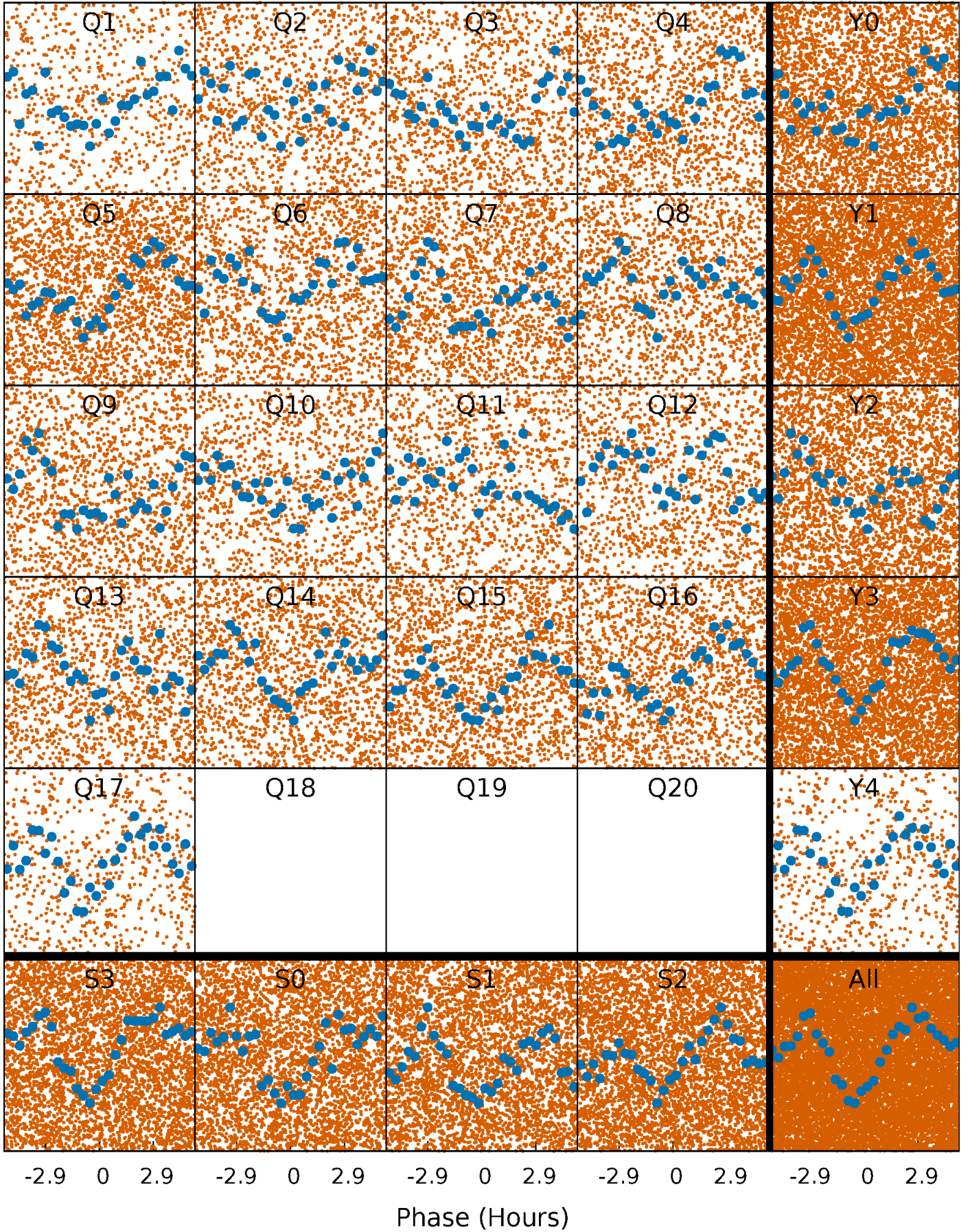


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



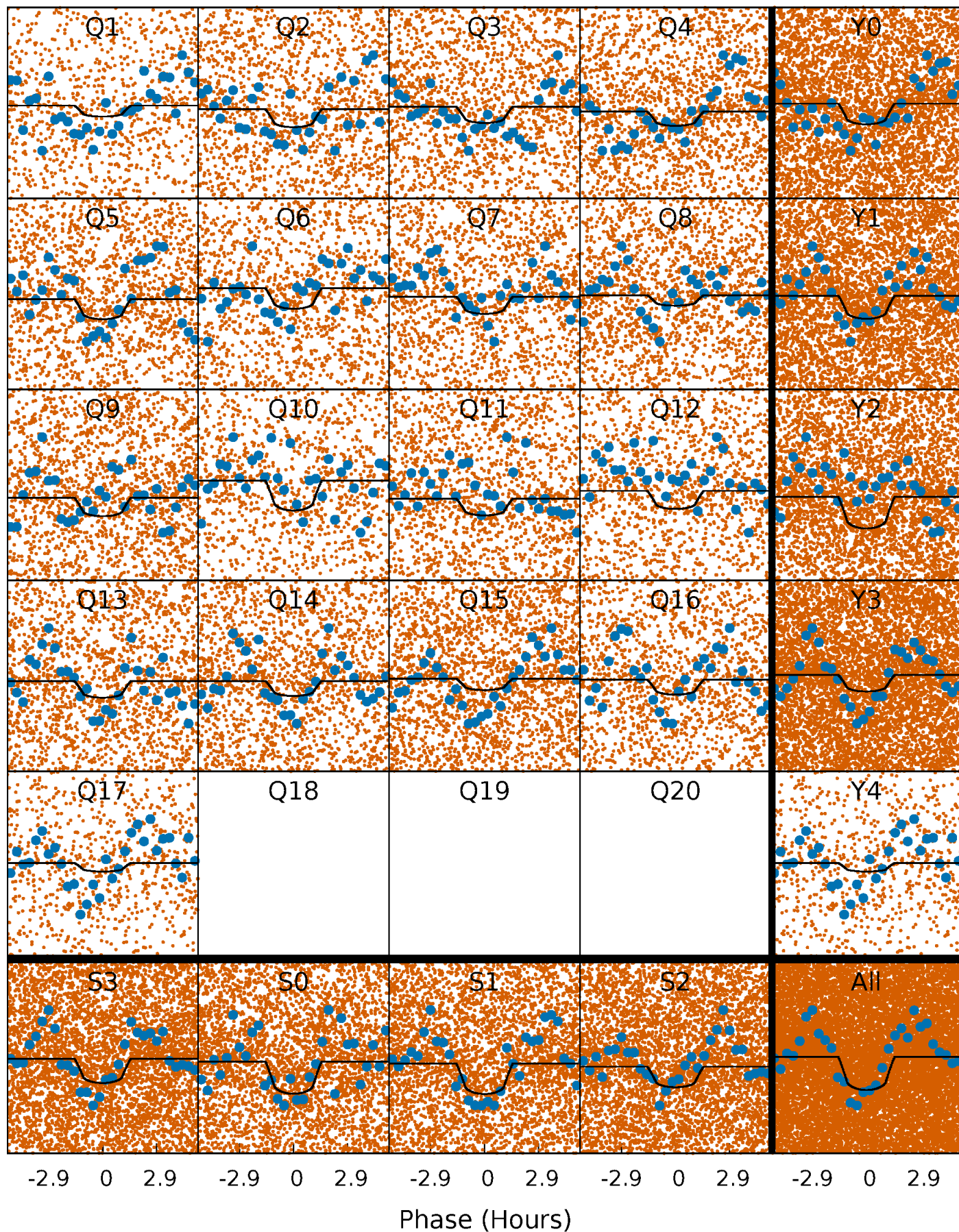
PDC Quarter-Phased Transit Curves

TCE 006628740-01 P= 0.532854 Days $T_0=131.957202$ (BKJD)



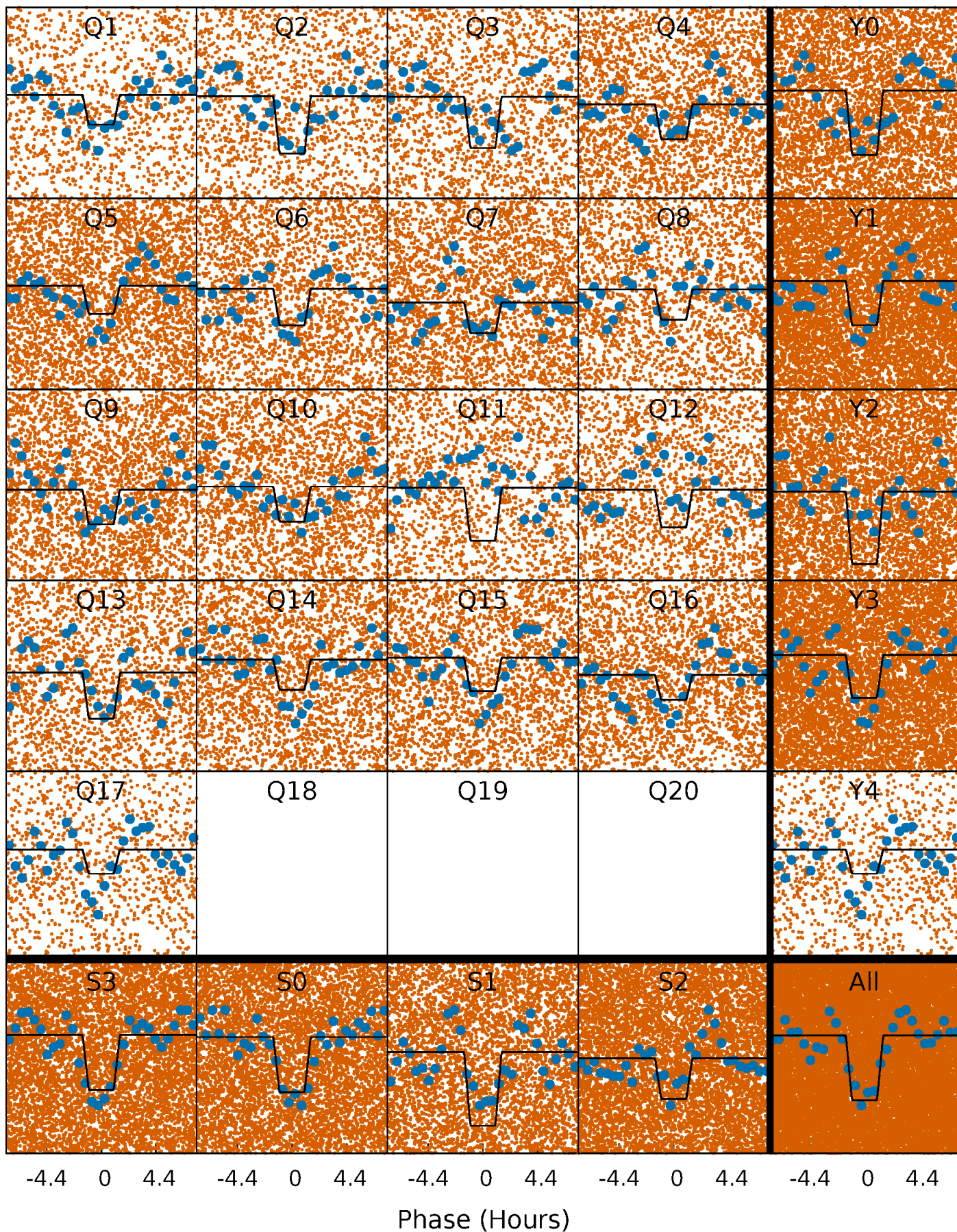
DV Quarter-Phased Transit Curves

TCE 006628740-01 P= 0.532854 Days $T_0=131.957202$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

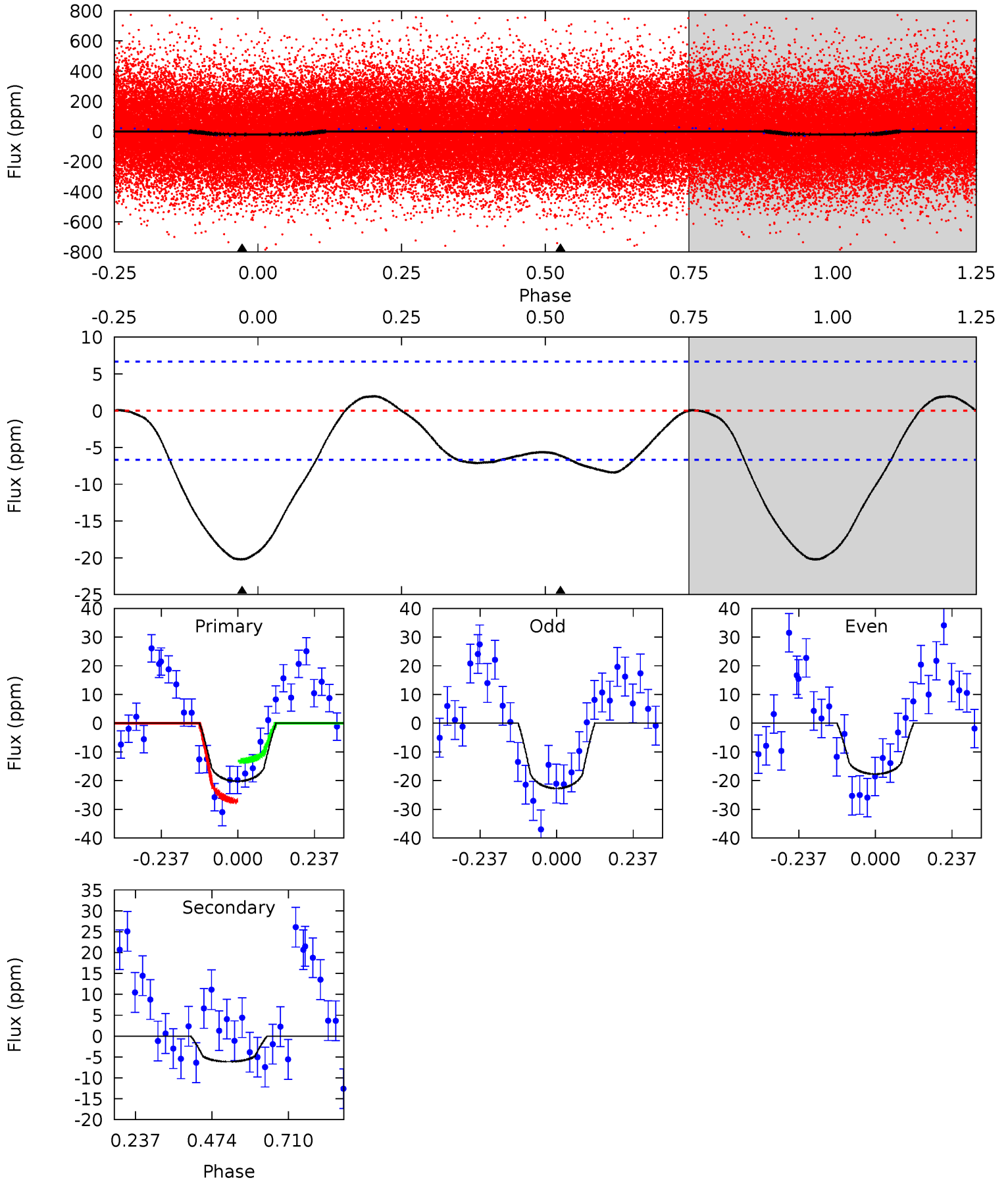
TCE 006628740-01 P= 0.532851 Days $T_0=131.942249$ (BKJD)



DV Model-Shift Uniqueness Test

006628740-01, P = 0.532854 Days, E = 131.424348 Days

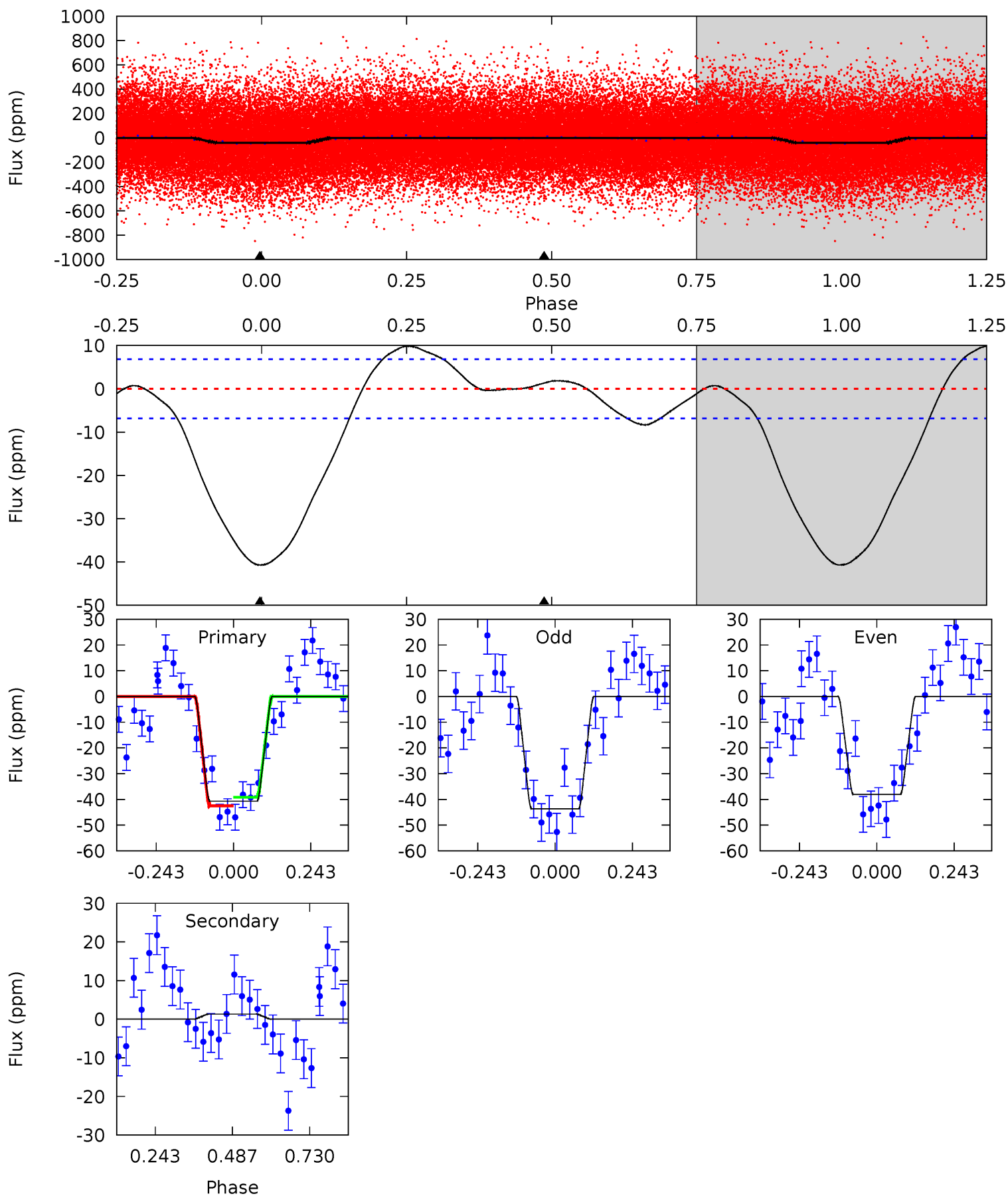
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	4.01	0	0	4.38	1.18	1.06	13.3	13.3	4.01	4.01	1.65	1.08	0.09	4.58



Alt Model-Shift Uniqueness Test

006628740-01, P = 0.532851 Days, E = 131.409398 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	-0.84	0	0	4.37	1.17	3.62	26.1	26.1	-0.84	-0.84	1.80	0.93	0.19	1.06



Stellar Parameters For KIC 006628740

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6266^{+175}_{-219}	$4.067^{+0.322}_{-0.161}$	$-0.220^{+0.250}_{-0.300}$	$1.613^{+0.436}_{-0.533}$	$1.108^{+0.175}_{-0.157}$	$0.372^{+0.750}_{-0.166}$
	+3%/-3%	+8%/-4%	+114%/-136%	+27%/-33%	+16%/-14%	+202%/-45%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006628740-01 / KOI 7571.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 2	$0.76^{+0.61}_{-0.45}$	4186^{+326}_{-351}	4398^{+2951}_{-2397}	$1.045^{+5.993}_{-0.743}$
Alt.	1 ± 2	$1.12^{+0.72}_{-0.56}$	4195^{+349}_{-401}	-4015^{+360}_{-493}	$-0.087^{+0.098}_{-0.351}$

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

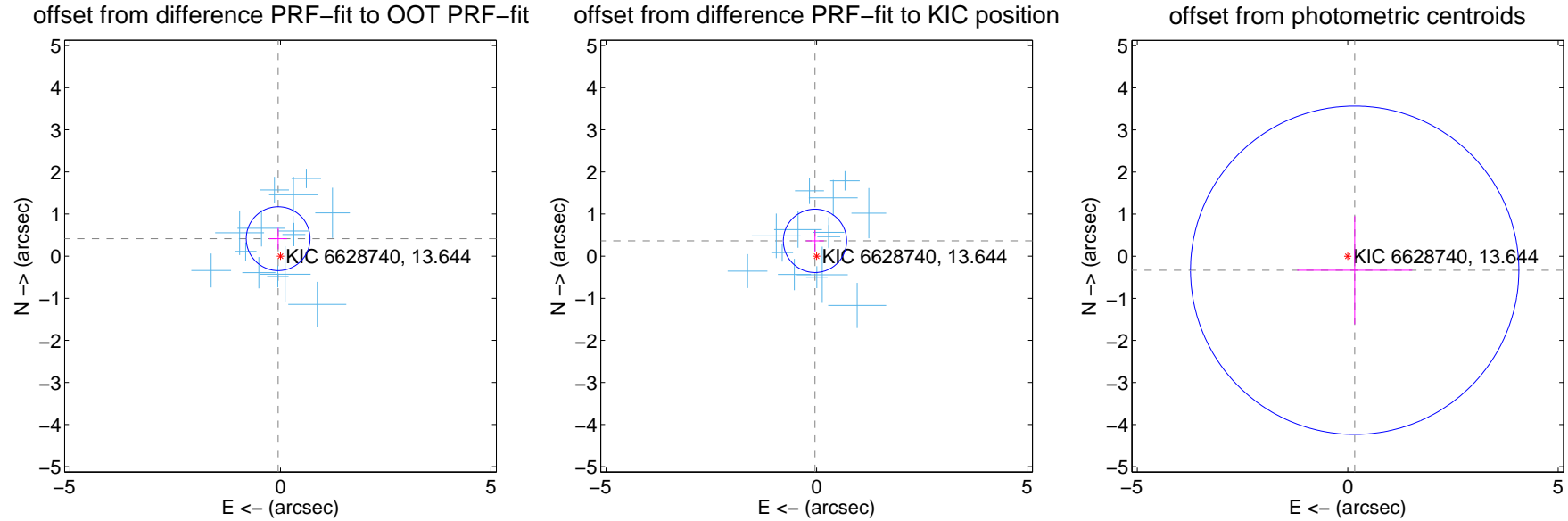
DV Centroid Data

Supplemental centroid analysis for 006628740-01. Kepler magnitude: 13.64. Transit SNR 8.07

There are 14 quarters with good PRF difference image offsets

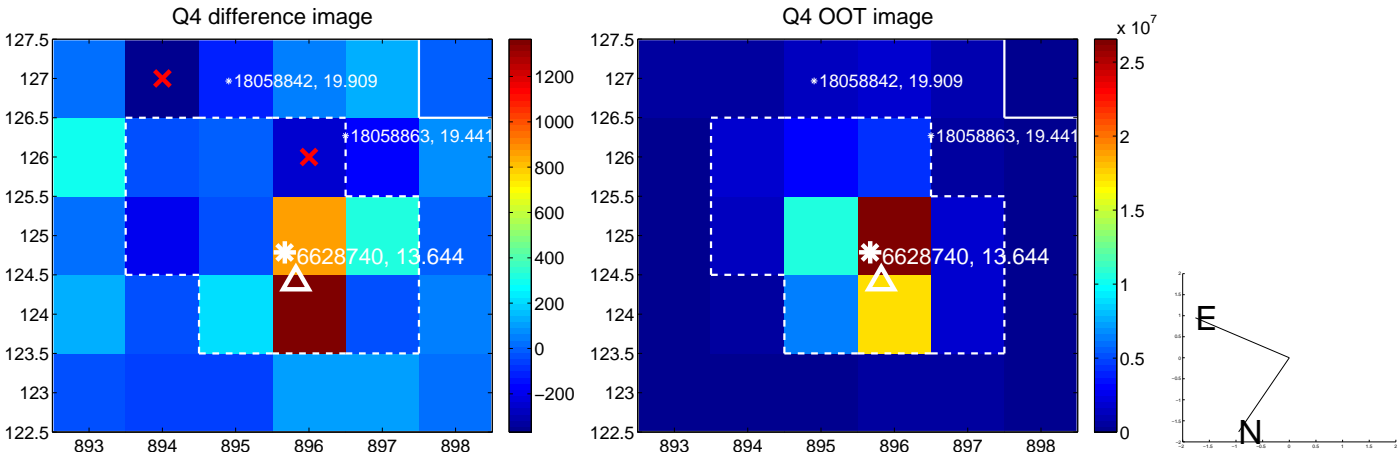
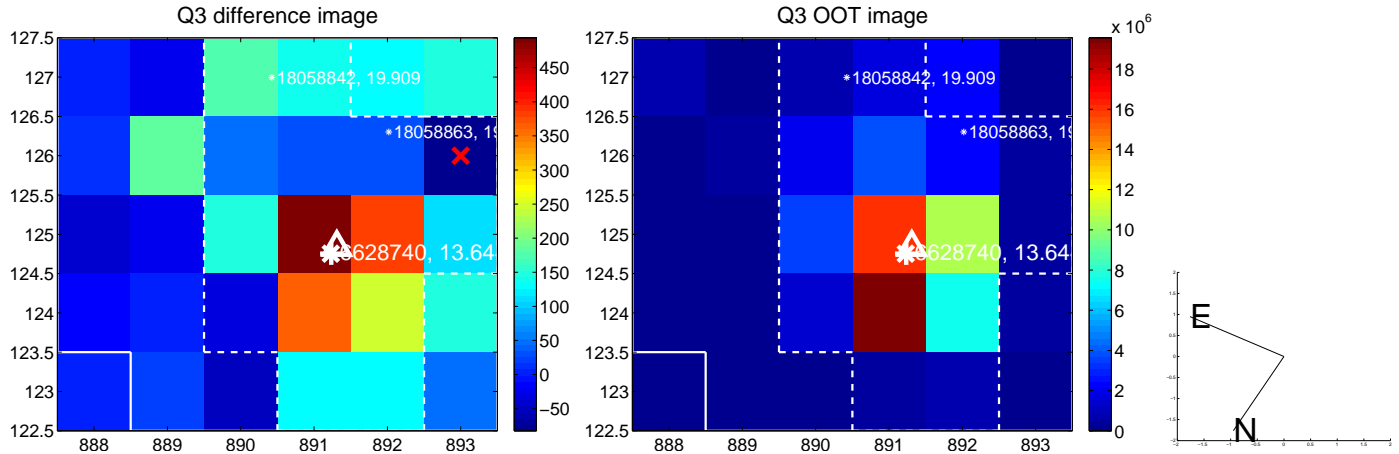
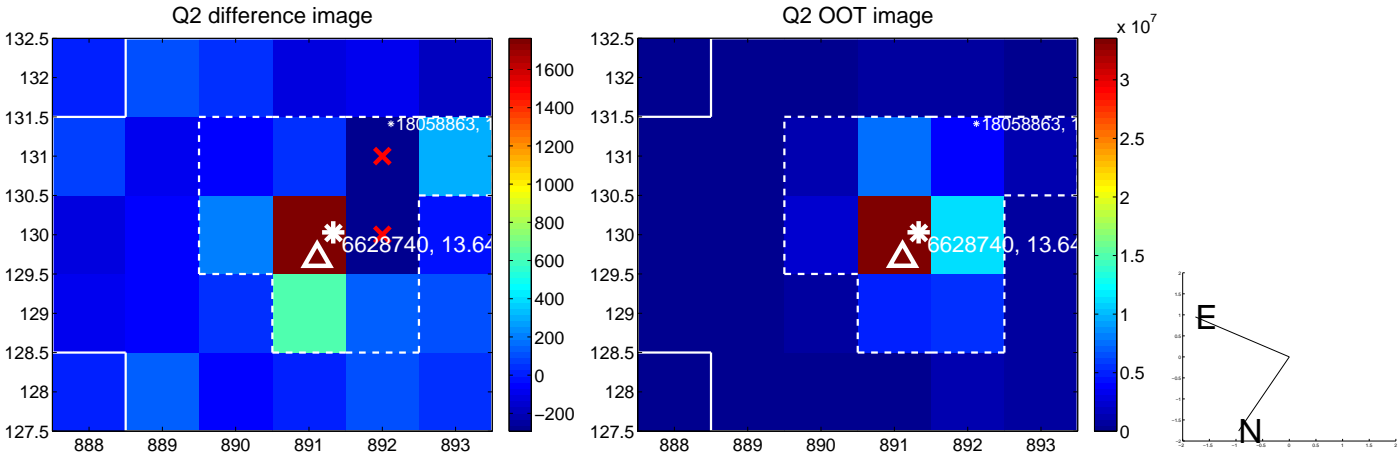
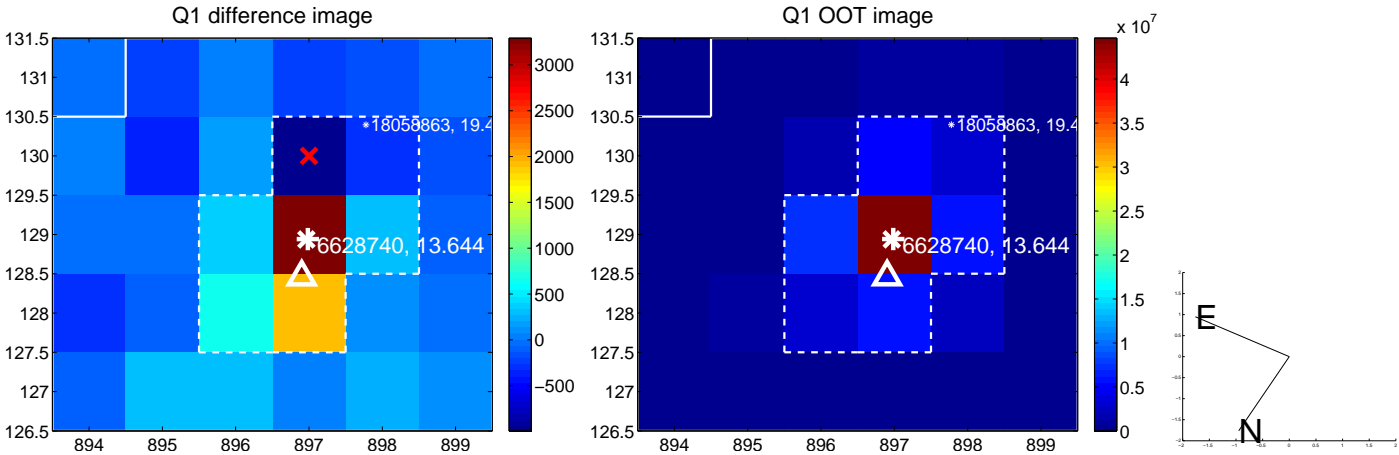
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.418 ± 0.253	1.65	0.054 ± 0.208	0.415 ± 0.253
PRF-fit source offset from KIC position	0.365 ± 0.251	1.46	0.038 ± 0.211	0.363 ± 0.251
photometric centroid source offset	0.37 ± 1.30	0.29	-0.17 ± 1.37	-0.33 ± 1.28

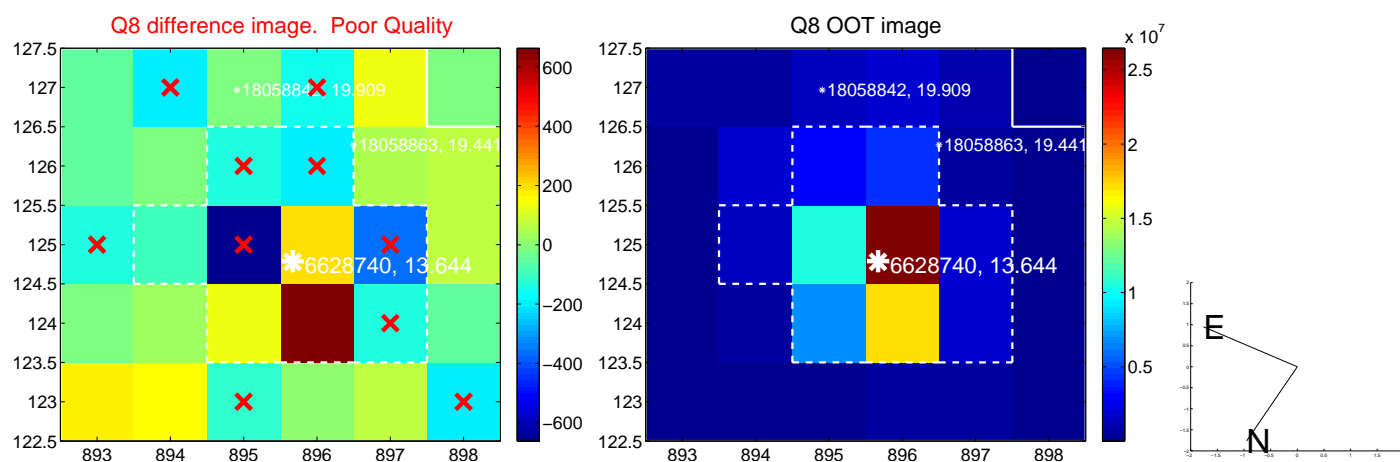
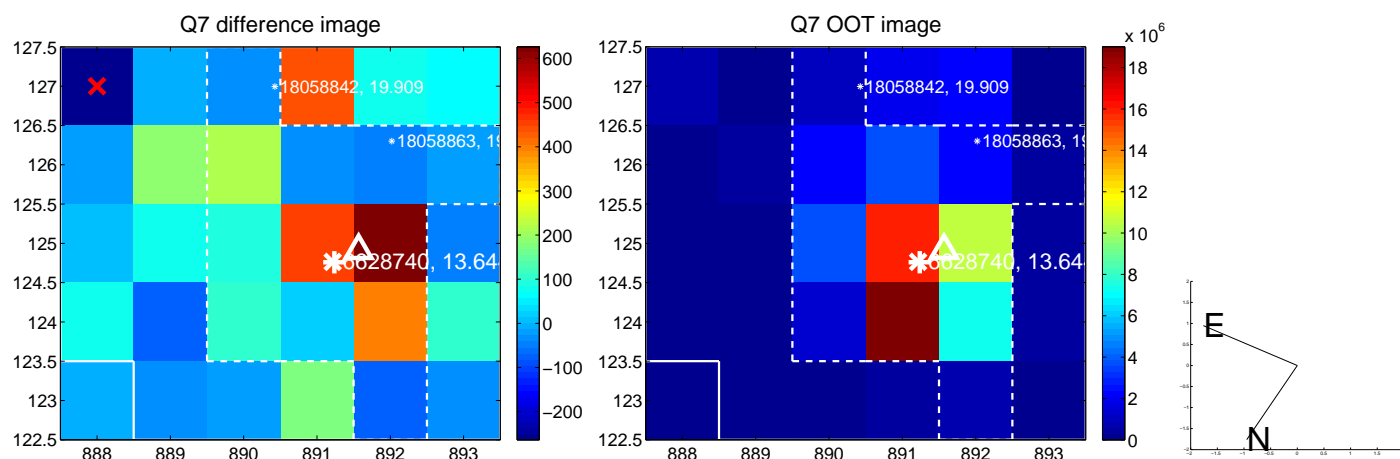
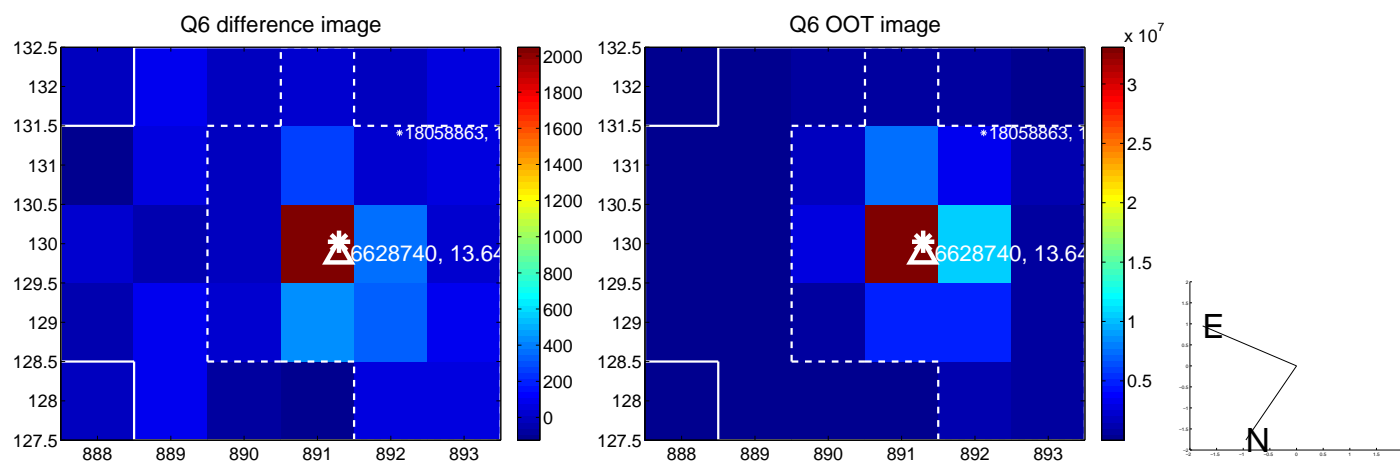
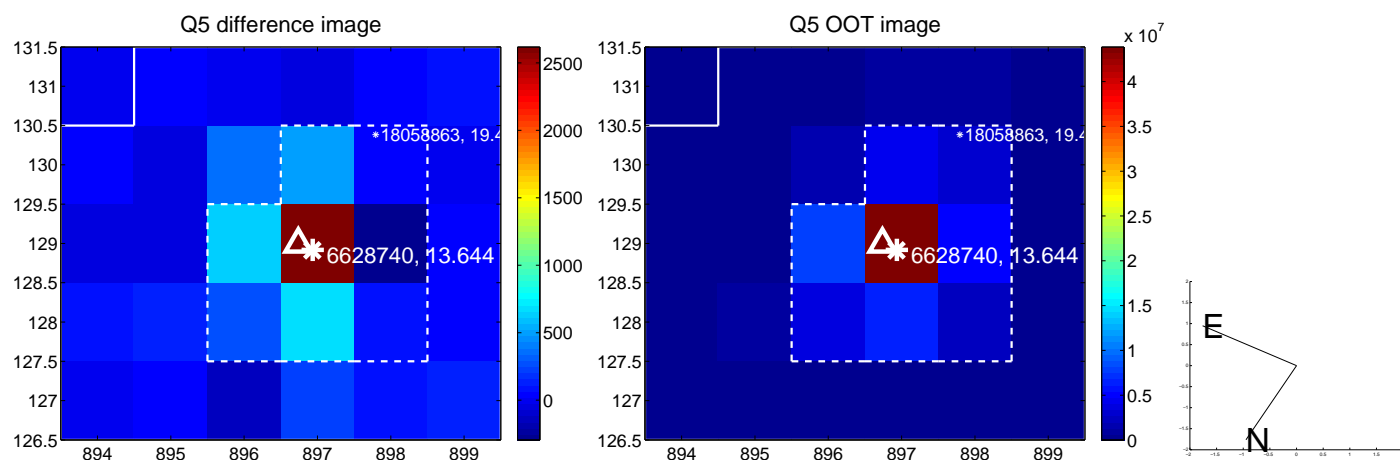


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

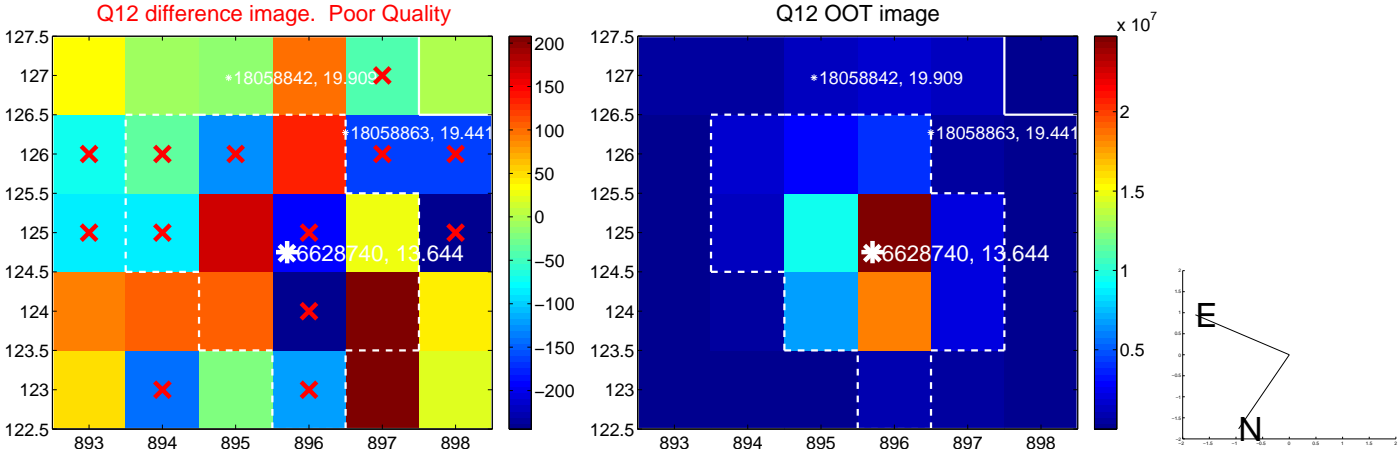
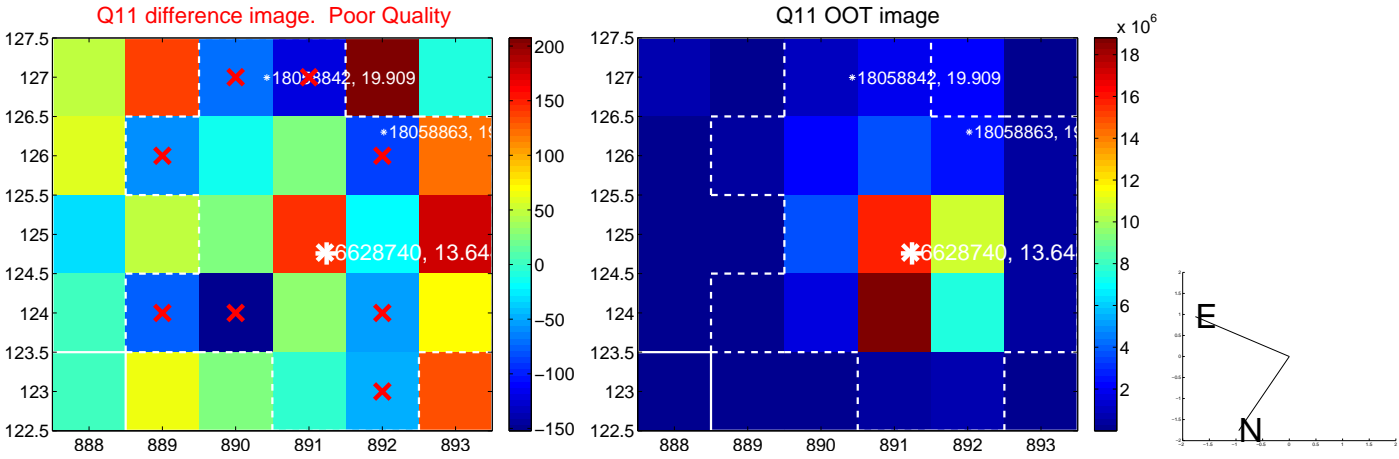
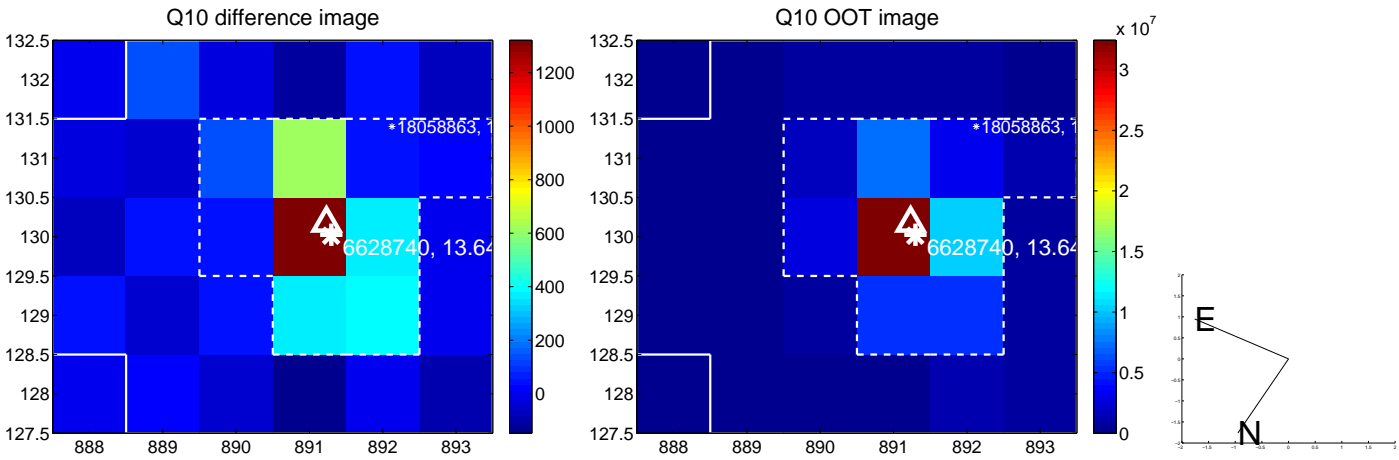
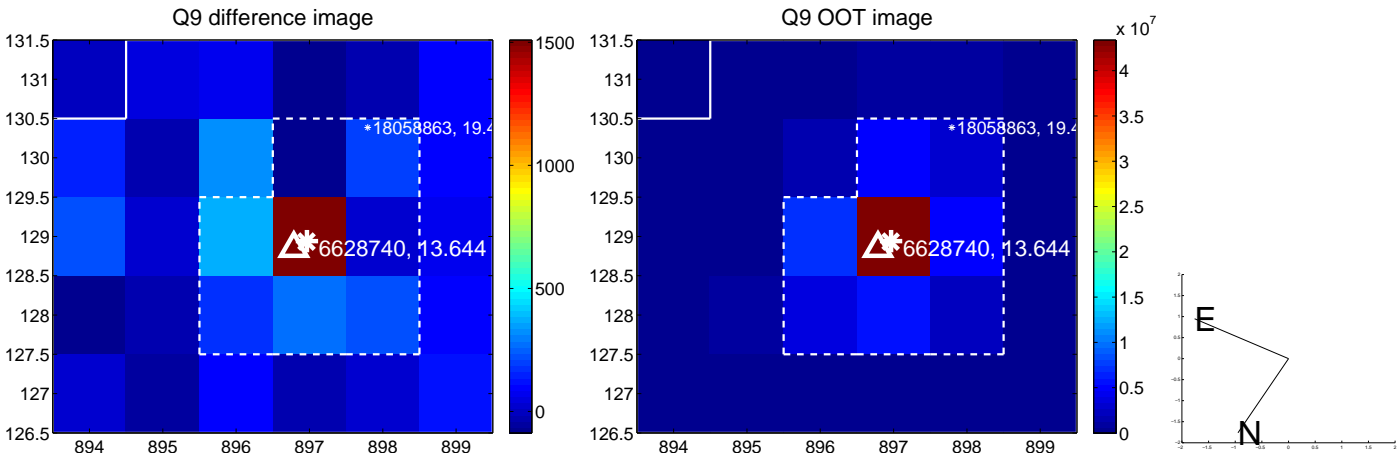
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



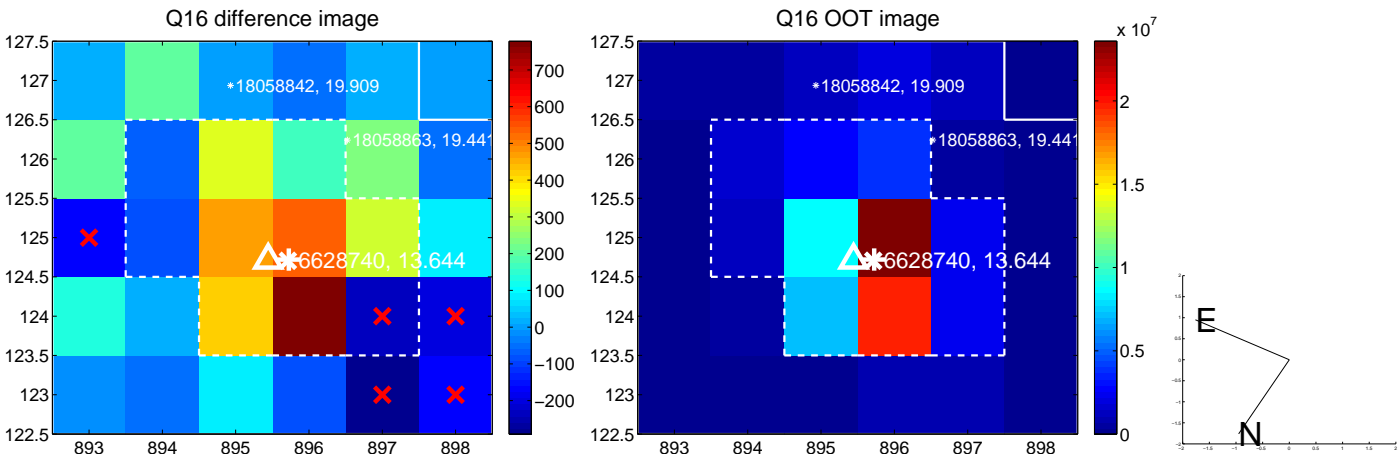
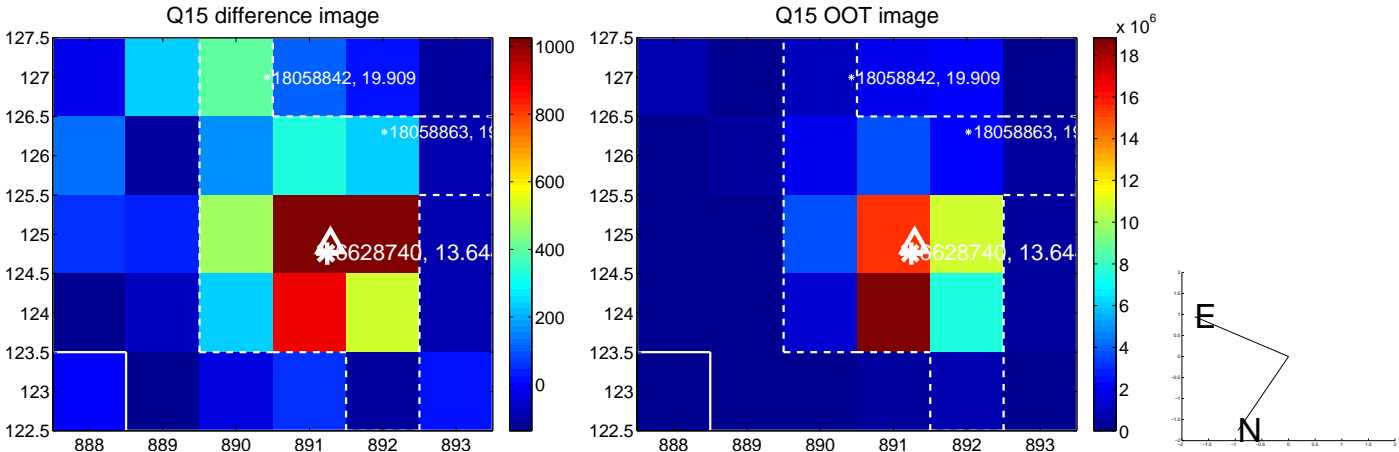
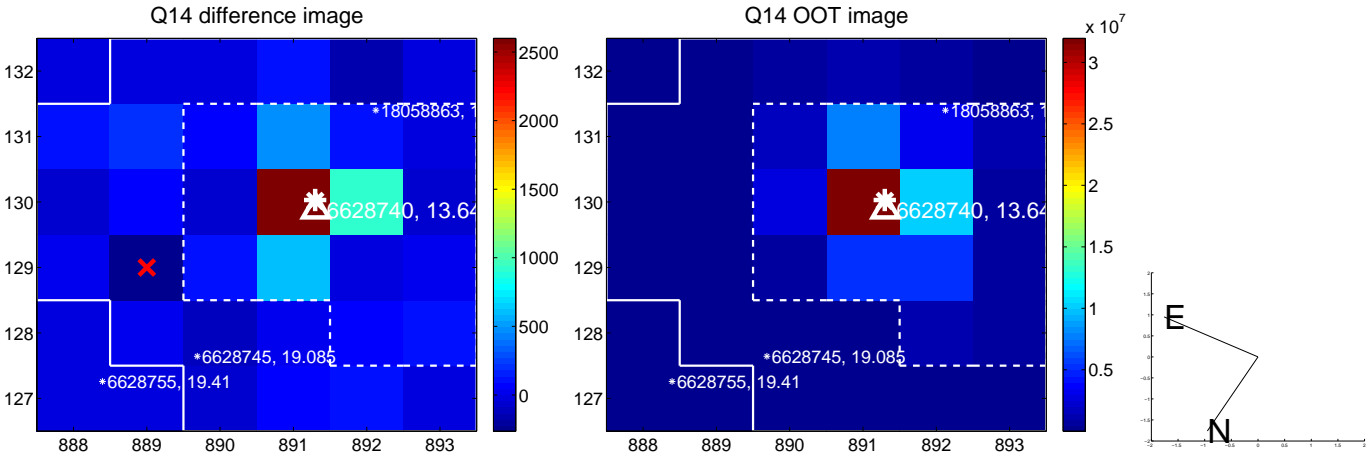
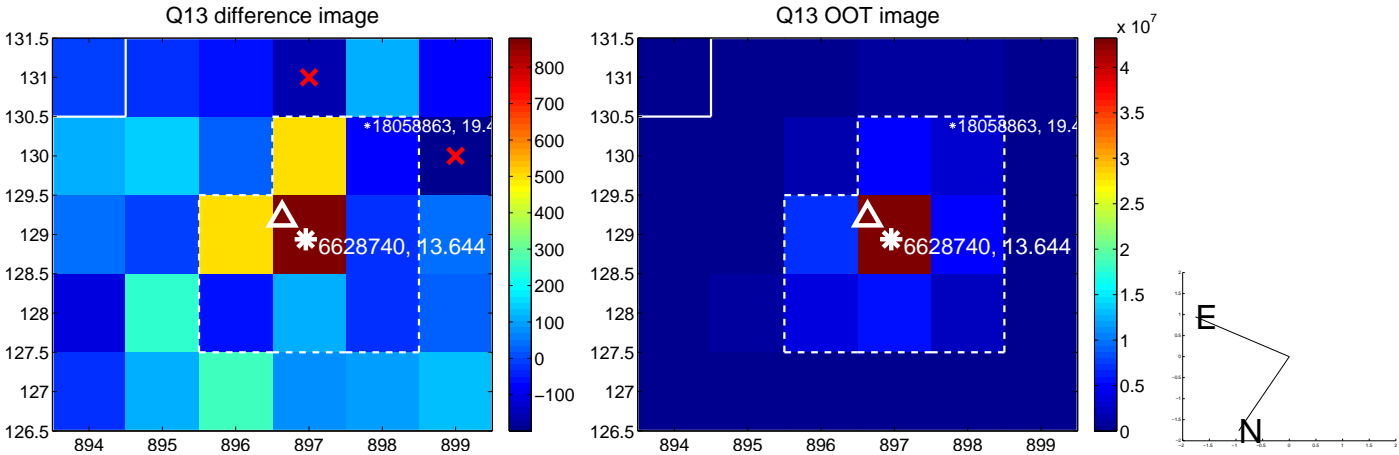
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



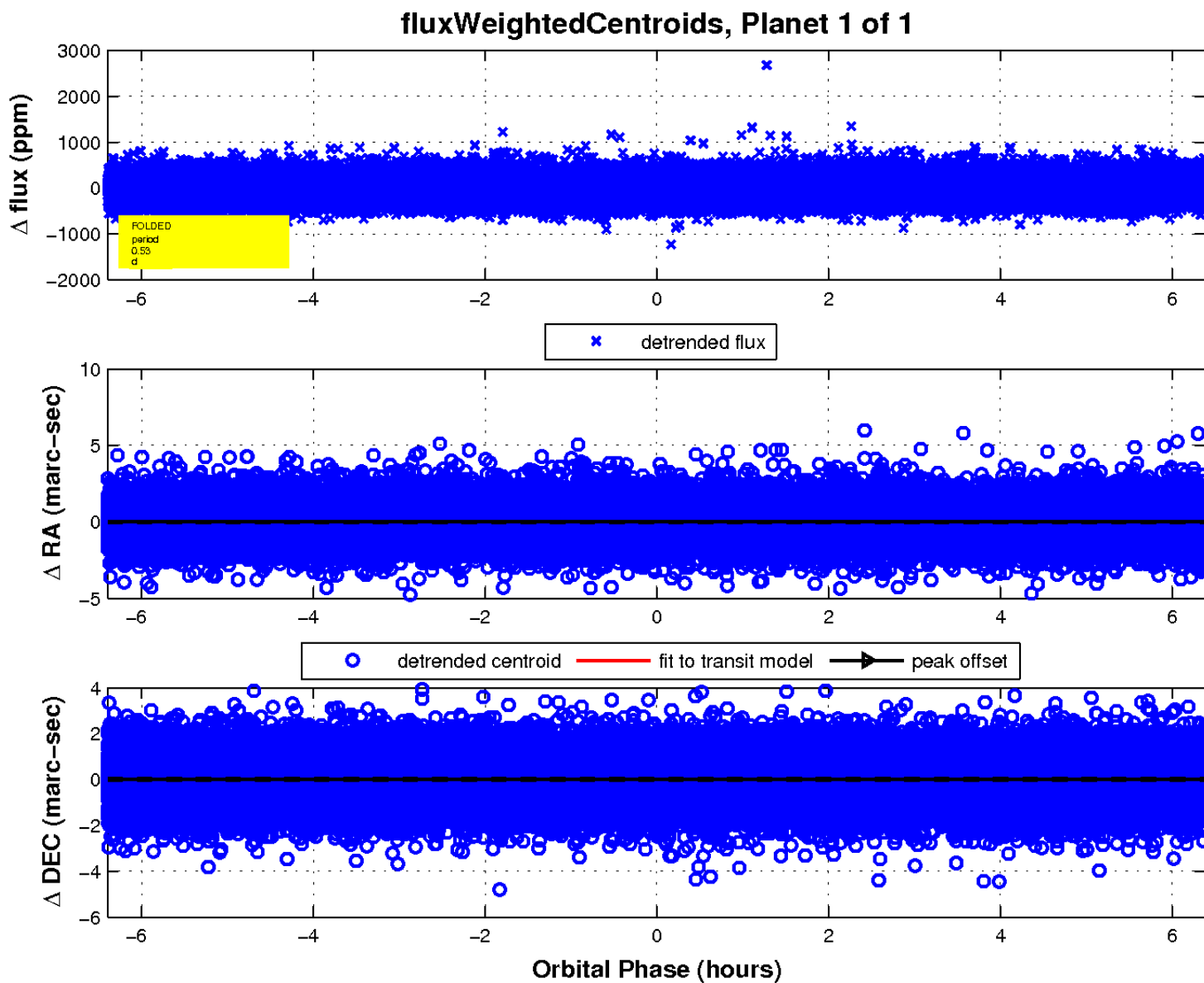
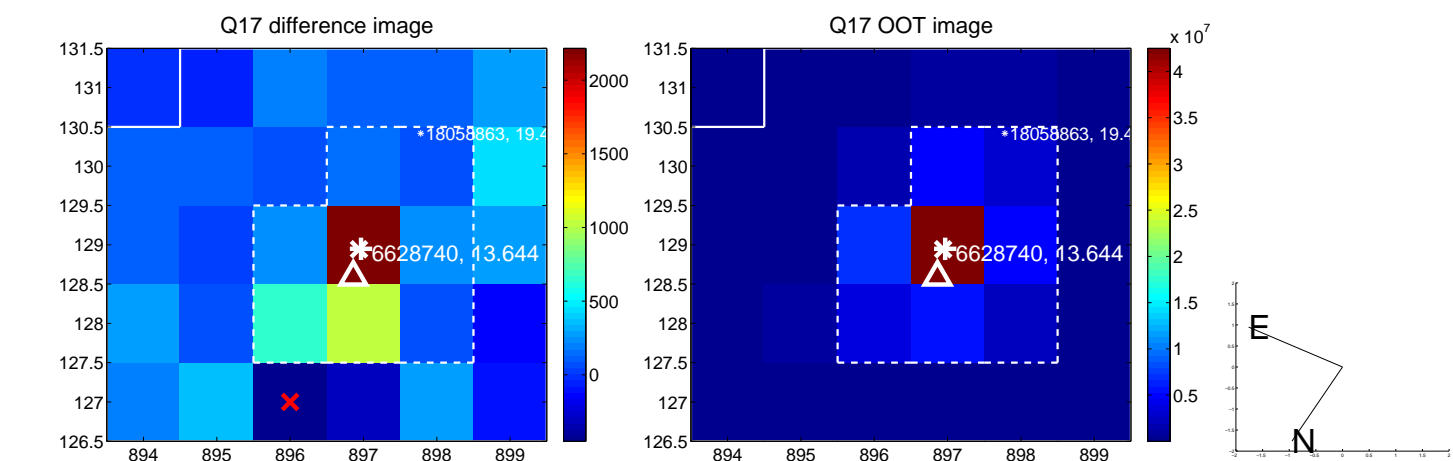
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

